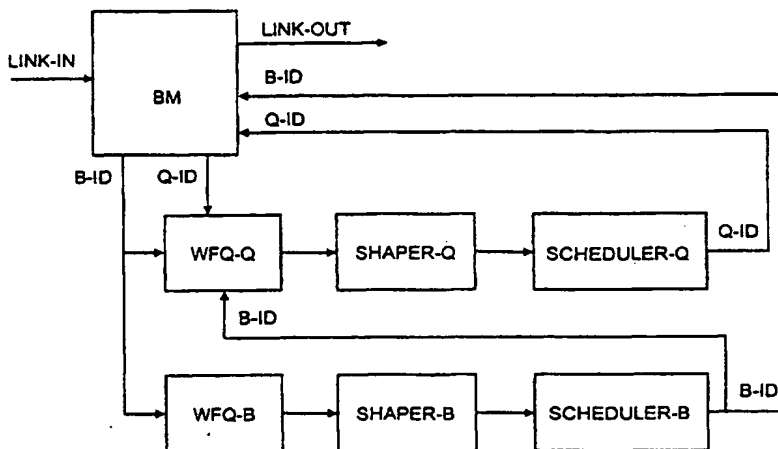




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**(54) Title:** METHOD AND DEVICE FOR THE WFQ STATISTICAL MULTIPLEXING OF ATM FLOWS

**(57) Abstract**

It is disclosed a statistical multiplexer of transmission flows conveying ATM traffic between line interfaces and the inputs of a switching matrix placed in a network node, or vice versa. The above mentioned flows support connections (Virtual Channel) which lie below service classes of different quality, for instance, CBR, rt-VBR, ABR, nrt-VBR, and UBR. A minimum band is guaranteed to some single flows (ABR) in the multiplexed flow, the peak band is guaranteed (CBR) to other ones. A buffer is provided to contain some cell transmission queues, coming from the different flows. The queues are shared into functional blocks. The band available on the multiplexed flow is dynamically shared among the blocks and the queues of each bloc through a double WFQ technique. It results a double ring architecture, for blocks and queues, where each ring has its own WFQ block followed by a Shaper and a Scheduler to limit the peak cell-rate of blocks and queues. One single calendar serves all the queues.